



MWD

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Office of the General Manager

June 9, 1998

Mr. Wayne Praskins
U.S. EPA Region IX
75 Hawthorne Street (H-6)
San Francisco, California 94105

Dear Mr. Praskins:

Comments on Phase 1 Treatability Study Draft Report, Perchlorate in Groundwater,
Baldwin Park Operable Unit, San Gabriel Basin

The draft report entitled; "Phase 1 Treatability Study Draft Report, Perchlorate in Groundwater, Baldwin Park Operable Unit (BPOU), San Gabriel Basin;" prepared by Harding Lawson Associates, was reviewed by the Metropolitan Water District of Southern California (Metropolitan). It is important to note that the following comments are only focusing on perchlorate removal by an anoxic biological treatment. Comments on any issues regarding the integration of this anoxic biological treatment with other treatment processes for removing other contaminants are not included.

General Comments

Metropolitan understood the subject study was designed to demonstrate an anoxic biological treatment technology for perchlorate to treat groundwater with low perchlorate levels to achieve 18 µg/L perchlorate limit or lower. This Phase 1 study was not intended to demonstrate that the product water met all Title 22 drinking water quality regulations. Therefore, all statements suggesting the treated water from the treatment technology for perchlorate removal will meet Title 22 drinking water regulations should be deleted or modified.

The subject study demonstrates that an anoxic biological treatment technology using a GAC/FB reactor is promising to reduce perchlorate levels from a range between 25 µg/L and 57 µg/L to below the detection limit (< 4 µg/L). However, this study did not provide information regarding the treatment process reliability, the operational margin of safety, and the stability of the treatment performance.

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Some water quality issues such as the formation of disinfection by-products, biological regrowth due to high nutrient levels in the product water (ethanol, methanol, total phosphorus, and ammonia nitrogen), and intermediate by-products from biodegradation were not addressed.

It is suggested that references should be provided for all equations listed in the report.

Specific Comments

- (1) Page v This subject study did not analyze any pathogens and disinfection by-products or investigate the biological regrowth issue in the distribution systems; therefore, the fifth bullet under the study objectives accomplished is not a true statement and should be modified.
- (2) Page 1 Paragraph one, lines one to four - Metropolitan is to assist the Three Valleys Municipal Water District in this BPOU project; therefore, the statement should be changed to ".....(EPA) and Three Valleys Municipal Water District (TVMWD) in association with Metropolitan Water District of Southern California (MWD)....."
- (3) Page 1 Paragraph four, lines six to seven - Metropolitan's criteria for acceptance of treated water into the distribution systems include that the downstream customers determine the acceptable perchlorate level in Metropolitan's distribution system. The U.S. Air Force toxicity study results may not change the aforementioned criteria. If the downstream customers demand that the perchlorate level in Metropolitan's distribution systems be very low or non-detect, a treatment process for perchlorate removal may be required regardless of the level of reference for dose (RfD) for perchlorate. The statement needs to be modified.
- (4) Page 3 Paragraph five (under Subtitle 2.4 Evaluation Different Source of Microorganism), lines six to eight - the waste sludge from the food processing industry is not necessarily lacking the pathogens. Please clarify the statement to characterize the waste sludge.
- (5) Page 4 Paragraph five, lines two to three - what is the commercial name of coal-based carbon used? How much was added to the system?
- (6) Page 14 The fifth bullet under Subtitle 6.0 - same as comment (1).

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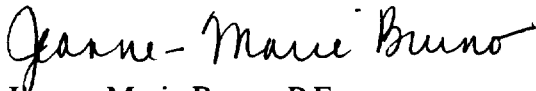
- (7) Page 14 The sixth bullet under Subtitle 6.0 - no demonstration of the conceptual model with the actual results was described in this report.
- (8) Page 14 The ninth bullet under Subtitle 6.0 - since the detection limit for ethanol is 5 mg/L, it is inappropriate to state that "little to no ethanol in the effluent."

Conclusion

The subject study successfully determined the reduction of perchlorate below detection limits; however, it did not demonstrate the potability of the product water produced from an anoxic biological treatment process. Metropolitan will be glad to work with the BPOU Steering Committee to resolve our concerns.

Metropolitan appreciates the opportunity to provide input into this draft report. If you have any questions regarding our comments, please call Dr. Sun Liang at (909) 392-5273.

Very truly yours,



Jeanne-Marie Bruno, P.E.

Acting Associate Director of Water Quality

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